

WTR	12/14/05
CU	12/23/05
CMC	12/13/05

BA WTR  
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Mail Stop 60189

DEC 23 2005

Memorandum

To: Project Leader, Lake Andes National Wildlife Refuge

From: Chief, Division of Water Resources *W/ CHERYL C. WILLIS*

Subject: 2004-2005<sup>5/6</sup> Water Use Reports/Water Management Plans

The subject reports for Lake Andes National Wildlife Refuge and Varilek, Sherman, Broken Arrow, and Roth Wildlife Production Areas have been reviewed and approved with the following changes for future reports.

Water Right No. 517-3 (Lake Andes NWR): The total annual amount on the original certificate is listed as 20,359 AF. The storage amount is 13,721 AF and seasonal amount is 6,813 AF actually adds up to 20,634 AF.

Water Right No. 5077-3 (Broken Arrow WPA): the storage amount is **131.2** not 1313.2.

Attached is the completed signature page for your files. Thank you for submission of these reports.

Attachment

bcc: WTR rf

WTR:CCordova:cc:12/13/2005  
I:\WATERUSE\SD\LAKE ANDES\wateruse\_05.doc



# LAKE ANDES NATIONAL WILDLIFE REFUGE COMPLEX

## ANNUAL WATER USE REPORT AND MANAGEMENT PLAN

2005

Prepared by: May Hsu Date: 11-7-2005

Concurrence: Michael J. Bryan Date: 11/7/05  
Project Leader

Refuges Approval: Robert F. Krey Date: 11/14/05  
Refuge Supervisor

Water Resources Review: Cheryl Williams Date: 12/23/05



WATER USE REPORT/MANAGEMENT PLAN - *SHORT FORM* - REPORT YEAR: 2005

STATION NAME: Lake Andes NWR MANAGING STATION: Lake Andes NWR Complex

WATER RIGHTS DATA

WATER RIGHT NO: 220-3 (Owens Bay Well) PRIORITY DATE: 7/6/1956

SOURCE: Dakota Sandstone artesian aquifer

WATER DIVERTED: YES X NO      IMPOUNDMENTS: YES X NO     

MEANS OF DIVERSION: well AF STORAGE: n/a

RATE OF DIVERSION: (see below) AF SEASONAL: n/a

WELLS: YES X NO      FREE FLOWING: 2.22 cfs or PUMPED: n/a GPM

TYPE OF USE: Fish & Wildlife: X Domestic:     

Crop Irrigation:      Stock:     

Other:     

INSPECTION DATA

*Please complete all pertinent information for ACTUAL use  
versus the Water Rights data.*

DATE OF INSPECTION: ~7/2005 INSPECTED BY: Mike Bryant

CONDITIONS AT INSPECTION: diminishing flow from well

AF STORAGE: n/a OR ESTIMATED ELEVATION: n/a

WELLS: FREE FLOWING: <2 cfs OR PUMPED: n/a GPM

CONDITION OF FACILITIES: water control structures in the distribution box for the well are  
deteriorating, but scheduled for replacement in 2006.

OVERALL CLIMACTIC CONDITIONS: drought

PROPOSED WATER PROGRAM: attempts to reduce flow at wellhead have caused leaking around well  
casing. Active management is limited.

COMMENTS:

WATER USE REPORT/MANAGEMENT PLAN - *SHORT FORM* - REPORT YEAR: 2005

STATION NAME: Lake Andes NWR MANAGING STATION: Lake Andes NWR Complex

WATER RIGHTS DATA

WATER RIGHT NO: 517-3 (Lake Andes) PRIORITY DATE: 4/22/1940

SOURCE: Andes Creek, Garden Valley Creek, other tributaries

WATER DIVERTED: YES ☐ NO ☒ (no longer) IMPOUNDMENTS: YES ☒ NO ☐

MEANS OF DIVERSION: n/a AF STORAGE: 20,359 af

RATE OF DIVERSION: n/a AF SEASONAL: n/a

WELLS: YES ☐ NO ☒ FREE FLOWING: n/a GPM or PUMPED: n/a GPM

TYPE OF USE: Fish & Wildlife: ☒ Domestic: ☐

Crop Irrigation: ☐ Stock: ☐

Other: ☐

INSPECTION DATA

*Please complete all pertinent information for ACTUAL use  
versus the Water Rights data.*

DATE OF INSPECTION: 9/9/05 INSPECTED BY: Steve Spawn, Mike Bryant

CONDITIONS AT INSPECTION: low water, exposed shoreline

AF STORAGE: <20,359 af OR ESTIMATED ELEVATION: 1430.7' amsl

WELLS: FREE FLOWING: n/a GPM OR PUMPED: n/a GPM

CONDITION OF FACILITIES: outlet replaced in 2005 during highway construction. Dike structures  
in fair condition, but will be replaced during dike rehabilitation (2007?).

OVERALL CLIMACTIC CONDITIONS: drought. Lake elevation is low. North Unit is dry.

PROPOSED WATER PROGRAM: No active management planned. Inflow is expected to be minimal.

COMMENTS:

WATER USE REPORT/MANAGEMENT PLAN - *SHORT FORM* -- REPORT YEAR: 2005

STATION NAME: Lake Andes WMD MANAGING STATION: Lake Andes NWR Complex

WATER RIGHTS DATA

WATER RIGHT NO: 5250-3 (Varilek WPA) PRIORITY DATE: 12/27/1988

SOURCE: a natural slough on Varilek WPA and private land

WATER DIVERTED: YES ☐ NO ☒ IMPOUNDMENTS: YES ☒ NO ☐

MEANS OF DIVERSION: n/a AF STORAGE: 139 af

RATE OF DIVERSION: n/a AF SEASONAL: n/a

WELLS: YES ☐ NO ☒ FREE FLOWING: n/a GPM or PUMPED: n/a GPM

TYPE OF USE: Fish & Wildlife: ☒ Domestic: ☐

Crop Irrigation: ☐ Stock: ☐

Other: ☐

INSPECTION DATA

*Please complete all pertinent information for ACTUAL use versus the Water Rights data.*

DATE OF INSPECTION: ~7/2005 INSPECTED BY: Mike Bryant

CONDITIONS AT INSPECTION: dry

AF STORAGE: <139 af OR ESTIMATED ELEVATION: <1614' amsl

WELLS: FREE FLOWING: n/a GPM OR PUMPED: n/a GPM

CONDITION OF FACILITIES:

OVERALL CLIMATIC CONDITIONS: drought

PROPOSED WATER PROGRAM: no active management

COMMENTS:

WATER USE REPORT/MANAGEMENT PLAN - *SHORT FORM* - REPORT YEAR: 2005

STATION NAME: Lake Andes WMD MANAGING STATION: Lake Andes NWR Complex

WATER RIGHTS DATA

WATER RIGHT NO: 5251-3 (Sherman WPA) PRIORITY DATE: 12/27/1988

SOURCE: a natural slough on Sherman WPA

WATER DIVERTED: YES ☐ NO ☒ IMPOUNDMENTS: YES ☒ NO ☐

MEANS OF DIVERSION: n/a AF STORAGE: 271 af

RATE OF DIVERSION: n/a AF SEASONAL: n/a

WELLS: YES ☐ NO ☒ FREE FLOWING: n/a GPM or PUMPED: n/a GPM

TYPE OF USE: Fish & Wildlife: ☒ Domestic: ☐

Crop Irrigation: ☐ Stock: ☐

Other: ☐

INSPECTION DATA

*Please complete all pertinent information for ACTUAL use  
versus the Water Rights data.*

DATE OF INSPECTION: ~7/2005 INSPECTED BY: Mike Bryant

CONDITIONS AT INSPECTION: nearly dry

AF STORAGE: <271 af OR ESTIMATED ELEVATION: <1591.7' amsl

WELLS: FREE FLOWING: n/a GPM OR PUMPED: n/a GPM

CONDITION OF FACILITIES:

OVERALL CLIMATIC CONDITIONS: drought

PROPOSED WATER PROGRAM: no active management

COMMENTS:



STATION NAME: Lake Andes WMD MANAGING STATION: Lake Andes NWR Complex

WATER RIGHT NO: 5077-3 (Broken Arrow WPA) PRIORITY DATE: 10/7/1985

SOURCE: Joubert Drain

WATER DIVERTED: YES X NO      IMPOUNDMENTS: YES X NO

MEANS OF DIVERSION: Dam #7 AF STORAGE: 1313.2 af

RATE OF DIVERSION: unknown AF SEASONAL: n/a

WELLS: YES \_\_\_\_\_ NO X FREE FLOWING: n/a GPM or PUMPED: n/a GPM

TYPE OF USE: Fish & Wildlife: X Domestic: \_\_\_\_\_

Crop Irrigation: \_\_\_\_\_ Stock: \_\_\_\_\_

Other: recreation X

Please complete all pertinent information for ACTUAL use versus the Water Rights data.

DATE OF INSPECTION: ~7/2005 INSPECTED BY: Steve Spawn, Mark Heisinger

CONDITIONS AT INSPECTION: low water

AF STORAGE: <131.2 af OR ESTIMATED ELEVATION: unknown

WELLS:            FREE FLOWING:   n/a   GPM            OR            PUMPED:   n/a   GPM

CONDITION OF FACILITIES:

OVERALL CLIMATIC CONDITIONS: drought

PROPOSED WATER PROGRAM:

COMMENTS:

WATER USE REPORT/MANAGEMENT PLAN - *SHORT FORM* - REPORT YEAR: 2005

STATION NAME: Lake Andes WMD MANAGING STATION: Lake Andes NWR Complex

WATER RIGHTS DATA

WATER RIGHT NO: 6013-3 (Roth WPA) PRIORITY DATE: 7/30/1997

SOURCE: tributary of Dry Creek

WATER DIVERTED: YES X NO      IMPOUNDMENTS: YES X NO     

MEANS OF DIVERSION: ditch plug in tributary AF STORAGE: 323 af

RATE OF DIVERSION: unknown AF SEASONAL: 212 af

WELLS: YES      NO X FREE FLOWING: n/a GPM or PUMPED: n/a GPM

TYPE OF USE: Fish & Wildlife: X Domestic: X

Crop Irrigation:      Stock:     

Other:     

INSPECTION DATA

*Please complete all pertinent information for ACTUAL use  
versus the Water Rights data.*

DATE OF INSPECTION: ~7/2005 INSPECTED BY: Mark Heisinger

CONDITIONS AT INSPECTION: low water

AF STORAGE: <323 af OR ESTIMATED ELEVATION: <1398.5' amsl

WELLS: FREE FLOWING: n/a GPM OR PUMPED: n/a GPM

CONDITION OF FACILITIES:     

OVERALL CLIMACTIC CONDITIONS: dry

PROPOSED WATER PROGRAM: no active management

COMMENTS: